

18

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/516,690	SHIMOE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jeff Natalini	2858	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Preliminary amendment filed 12/6/04.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>12/6/04</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|--|--|

## **DETAILED ACTION**

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

In regard to claim 1 and 13, the prior art does not teach or render obvious phase lock means for detecting zero voltage phrase of the supply voltage waveform; supply voltage waveform comparing means for outputting a voltage dip detection signal based on the comparison between said supply voltage waveform and the supply voltage waveform threshold, in the case where said determination region setting means determines as being a comparative determination effective region of the supply voltage waveform; and phase shift voltage waveform comparing means for outputting a voltage dip detection signal based on the comparison between said phase shift voltage waveform and the phase shift voltage waveform, in the case where said determination region setting means determines as being a comparative determination effective region of the phase shift voltage waveform in the combination as claimed.

Claims 2-12 and 14-17 are allowable because of their dependence from an allowable base claim.

In regard to claim 18, the prior art does not teach or render obvious phase lock means for detecting zero voltage phrase of the supply voltage waveform; and logical multiplication means between an output of said supply voltage waveform comparing means and an output of said recorded waveform comparing means; and voltage dip detection output means for outputting a voltage dip detection output by logical addition

between an output of said logical multiplication means and an output of said continuity determination means.

Claim 19 is allowable because of its dependence from allowable claim 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The most pertinent prior art is as follows:

Nakayama (6850237) discloses a waveform recording system for recording a prescribed input signal so as to display the waveform and has comparison means for determining the relationship between the wave data and a reference value.

Fazakas (6628125) discloses an apparatus for detecting changes in electrical signals, the apparatus containing: a pulse generator, a separate input signal, and a window comparator and AND gates for use in detecting a change in the electrical signals.

Ohnishi (5512837) discloses a voltage drop detecting circuit comprising multiple pulse generating circuits and a shift register.

Eicher (3648070) discloses a structure for counting the number of voltage dips in a source of electrical energy by comparing each single cycle voltage with a reference value.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Natalini whose telephone number is 571-272-2266. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeff Natalini



**ANJAN DEB  
PRIMARY EXAMINER**